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EXAMINER

NATNAEL, PAULOS M

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,873

Applicant(s)

ALBERTELLI, LAWRENCE E.

Examiner

Paulos M. Natnael

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) Claim(s) ____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) ____ is/are objected to.

8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. ____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.

4) Interview Summary (PTO-413) Paper No(s) ____.

5) Notice of Informal Patent Application (PTO-152)

6) Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Harshbarger, Jr. et al., U.S. Pat. No. 5,351,201.

Considering claim 1, Harshbarger, Jr. et al. disclose all claimed subject matter, note;

a) the claimed imaging target including a plurality of sub fields having a progression of image feature size and pitch encompassing the resolution of said imaging system to produce a captured image is met by Fig. 4H; *which is this case is an imaging target for the camera 26 (Fig. 1).*

b) inspecting said captured image for presence or absence of Moire' patterns in sub-fields of said captured image, is met by the disclosure "the first step 54, is to set up the camera-to-display under test interface, accomplished by adjustably mounting camera 26 in relation to display under test. This can be accomplished either manually or by an automated computer controlled procedure." (col. 8, lines 14-19)

c) determining resolution of said imaging system from feature size and pitch in sub-fields inspected in said inspecting step is met by the disclosure "The present invention can be utilized to perform all types of display evaluation including resolution for peak-to-peak response and MTF, black/white vertical split for risetime measurements, and alternating black/white at various rates for lag and image retention analysis." (col. 9, lines 63-68)

Considering claim 2, determining step determines resolution from a subfield pattern having a minimum of Moire fringes.

Regarding claim 2, see rejection of claim 1(c).

Considering claim 3, a method as recited in claim 1 wherein said determining step determines resolution from a subfield imaged as uniform gray subfield.

Regarding claim 3, see rejection of claim 1(c).

Considering claim 4, a method as recited in claim 1, including the further step of determining alignment of said imaging system from Moire' fringe angle in sub-fields inspected in said inspecting step, is met by camera alignment and focus, Fig.3, which can be performed manually. (col. 8, lines 14-19)

Considering claim 5, a method as recited in claim 1 including the further step of

printing said target on a printer connected to a computer is met by step 66, report results of comparison. (see also printer 50, fig.2)

Considering claim 6, the claimed a target for determining resolution of an imaging system by inspecting an image of said target for Moire' fringes, said target including a plurality of sub-fields, each subfield including a plurality of features, said plurality of subfields having a progression of image feature size and pitch encompassing the resolution of said imaging system, referred to an object plane of said imaging system, is met by Fig.4H;

Considering claim 7, a target as recited in claim 6, wherein said features include lines and spaces is met by the lines and spaces in Fig. 4H;

3. Claims 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hibbs et al., U.S. Pat. No. 5,508,803.

Considering claim 6, the claimed a target for determining resolution of an imaging system by inspecting an image of said target for Moire' fringes, said target including a plurality of sub-fields, each subfield including a plurality of features, said plurality

of subfields having a progression of image feature size and pitch encompassing the resolution of said imaging system, referred to an object plane of said imaging system, is met by Fig.1;

Considering claim **7**, a target as recited in claim 6, wherein said features include lines and spaces is met by the lines and spaces in Fig. 1;

4. Claims **6** and **7** are rejected under 35 U.S.C. 102(b) as being anticipated by Sussmeier, U.S. Pat. No. 5,760,829.

Considering claim **6**, the claimed a target for determining resolution of an imaging system by inspecting an image of said target for Moire' fringes, said target including a plurality of sub-fields, each subfield including a plurality of features, said plurality of subfields having a progression of image feature size and pitch encompassing the resolution of said imaging system, referred to an object plane of said imaging system, is met by Fig.2;

Considering claim 7, a target as recited in claim 6, wherein said features include lines and spaces is met by the lines and spaces in Fig. 2;

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmeier, U.S. Pat. No. 5,760,829 in view of Neyman, U.S. Pat. No. 5,917,987.

Considering claim 8, Sussmeier discloses all claimed subject matter, except for; further including indicia indicating a resolution corresponding to feature size of features in a subfield;

Regarding claim 8, Sussmeier does not specifically disclose indicia to indicate resolution. However, it is well known in the art to use numerical units on the screen or target image to indicate the value or range of a parameter. In that regard, Neyman, for example, discloses a system for controlling the transfer of an image on a first medium to a second medium which uses a control chart as in Figs. 4-6 having fields labeled with luminance units 56a-56g corresponding to preferred range of luminance units. (see col. 10, lines 7-20)

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Sussmeier by adding numerical units or indicia within the target image to numerically indicate its resolution corresponding to preferred range of resolution values in order to make the inspection easier for an operator who would then quickly compare and determine the resolution of a given target image by inspecting the numerical values therein.

Considering claim **9**, including indicia indicating a resolution corresponding to pitch of features in a subfield.

Regarding claims 9, see rejection of claim 8;

Considering claim **10** and **11**, wherein said indicia is a human readable number;

Regarding claims 10 and 11, see rejection of claim 8.

Considering claim **12**, including reference numbers corresponding to resolution of said imaging system and a further indicia.

Regarding claims 12, see rejection of claim 8.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brandstetter et al. U.S. Pat. No. 6,075,893 disclose a computer controlled optical system for angular alignment of structures using moiré patterns.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 6:30am -3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Paulos M. Natnael

March 8, 2003



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600